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Attorney Reference Number 4641-56502
Application Number 09/749,865

Remarks

Consideration and entry of the amendments submitted herein are requested in view of the foregoing amendments and the following remarks.

Claims 1-6, 15-16, and 38-42 are pending. In this amendment, claims 1, 4, 15, and 38 are amended; claims 40-41 are canceled without prejudice; and claims 2-3, 5-6, 16, 39, and 42 are unchanged.

The amendments to claim 1 clarify certain features concerning the channel. See FIGS. 1, 4, and 5 showing channels that extend longitudinally along at least a portion of the adhesion surface. These figures also show the channels being configured, in combination with the downstream-facing surface of the substrate adhered to the adhesion surface, to define respective conduits for the heat-transfer gas.

Claim 4 is amended to clarify that the second predetermined time instant occurs when the fabrication process executed on the substrate is at least 80% but not yet 100% complete. Although Applicants deem this amendment as unnecessary, it is made so as to advance prosecution. This is because claim 1, from which claim 4 depends, already states that the second time instant occurs during execution of the fabrication process. Hence, the second time instant occurs before the fabrication process is 100% complete.

Claim 15 is amended in a manner similar to certain of the amendments to claim 1.

Claim 38 is amended to include features previously recited in claims 40 and 41, resulting in the cancellation of claims 40 and 41.

Claims 1-6 and 15-16 stand rejected for alleged obviousness from a combination of Matsuda, Parkhe, and Yutaka. The Office action admits that Matsuda fails to disclose evacuation of HTG during execution of the fabrication process and fails to disclose a controller configured to control all aspects of the system including the fabrication process. Parkhe is understood to discuss a controller, but this reference (similar to Matsuda) fails to disclose evacuation of HTG during execution of the fabrication process. The Office action contends that Yutaka fulfills these deficiencies of Matsuda and Parkhe by allegedly disclosing that "the supply of HTG may be shut down almost before completion of etching process when RF power for plasma and DC power for chucking is [*sic*; are] turned off. [Emphasis added.] This contention of Yutaka fulfilling the deficiencies of Matsuda and Parkhe is incorrect. Applicants include herewith an English translation (by computer at the JPO) of Yutaka. Yutaka is

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directed to certain etching processes. According to Yutaka, "if the end of etching is approached," the HTG supply is "stopped before removal of the residual-absorption force of a sample" to suppress flow of HTG into a vacuum-processing "room" (chamber). See page 6, lines 1-3 (paragraph 18); page 9, lines 10-18 (paragraph 32). But, there is no teaching or suggestion in this reference of performing an evacuation of the HTG from channels before stopping the etching process (or even after stopping the etching process).

According to conventional methods such as Yutaka, HTG is kept in the channels and conduits during performance of the fabrication process in order to control the temperature of the substrate (and thus thermal expansion thereof) effectively. In contrast to conventional methods, the subject claims reflect the discovery by the Applicants that thermal expansion of the substrate is negligible even if the HTG channels are evacuated while the fabrication process is nearing completion (e.g., between 80% and 100% completed). See specification page 14, lines 3-21. Thus, the problem set forth on page 2, lines 7-25 is avoided. Yutaka provides no hint whatsoever of this discovery. Therefore, the deficiencies of Matsuda and of any combination of Matsuda and Parkhe are not satisfied by Yutaka.

The Office action contends that it would be obvious from Yutaka "that HTG is not turned off before 80% completion of the fabrication process." This contention is speculative and unfounded. There is nothing in Yutaka providing any guidance whatsoever regarding the 80% limit.

Therefore, claims 1-6 and 15-16 are properly allowable.

Claims 38-40 and 42 stand rejected for alleged obviousness from a combination of Shamouilian and Onishi. In this regard, the Office action indicated that claim 41 would be allowed if rewritten in independent form. To such end, claim 38 is amended to include the features previously recited in claims 40 and 41. Hence, claim 38 now is allowable, resulting in the allowability of claim 42.

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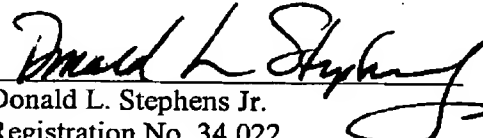
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Claims 1-6, 15-16, 38-39, and 42 are allowable, and early action to such end is requested.

Respectfully submitted,

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